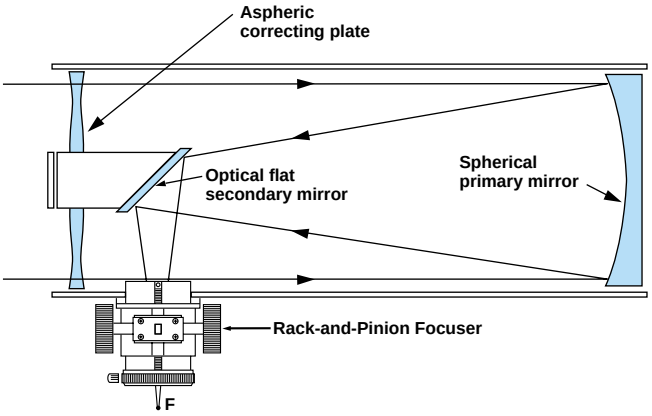
Meade® LXD55-Series Schmidt-Newtonian, Schmidt-Cassegrain, and Achromatic Refracting Telescopes

Wide-field, diffraction-limited Schmidt-Newtonians and high-resolution achromatic refractors or Schmidt-Cassegrain, mounted on the all-new Autostar-controlled, LXD55 German-type equatorial mounting.

Meade LXD55-Series telescopes provide a new level of sophistication and precision at a moderate price. All nine models of the series, including five Schmidt-Newtonians, three achromatic refractors, and one Schmidt-Cassegrain include the exclusive Meade LXD55 equatorial mount with Autostar control system.

LXD55 Equatorial Mount: Designed by Meade engineers and manufactured of machined aluminum for high-performance photo-visual observing, the new Meade LXD55 German-type equatorial mounting moves effortlessly across the skies in either tracking or automatic GO TO modes. Manual fine-adjustment controls in azimuth (horizontal) and elevation (latitude angle) facilitate alignment of the mounting to the celestial pole; the standard-equipment polar alignment viewfinder, with illuminated reticle for easy visibility against the night sky, provides visual confirmation of precise alignment.

The Meade Schmidt-Newtonian Optical System. The highly aspheric correcting plate fully corrects the spherical aberration induced in the image by the primary mirror.



All LXD55-Series telescopes include a quick-release cradle ring assembly, so that each optical tube-with-cradle-rings-attached may be easily removed as a unit from the mounting for transport in the field.

Autostar Dual-Axis Electronic Control System: A revelation of advanced electronic and software design, the exclusive patented Meade Autostar system, included as standard equipment with most LXD55-Series telescopes *(see model specifications, below),* permits an amazing range of capabilities never before offered on telescopes in this price and aperture class:

Automatic GO TO capability at 4.5°/second on both axes simultaneously, to 30,223 database objects, including:

13,235 deep-sky objects — galaxies; diffuse and planetary nebulae; star clusters; the complete Messier, Caldwell, IC, and NGC catalogs.

16,800 stars sorted by name, Smithsonian Astrophysical Observatory (SAO) catalog numbers, double and variable stars.

50 objects in the Solar System, including the 8 major planets from Mercury to Pluto; the Moon; 26 asteroids; 15 comets.

The #497 Autostar Computer Controller automatically locates over 30,000 database objects, including entire catalogs of deep-space objects.

50 Earth satellites; 200 memory locations for user-defined objects.

"Here in Japan, where Meade is the number one Schmidt-Cassegrain brand by a large quantity, your new LXD55 Schmidt-Newtonians have received a lot of attention. My personal choice was the 8" f/4 model, and I have been extremely pleased with the telescope in every respect. The equatorial mounting is solid and vibration-free for both high-magnification visual observing and for astrophotography. The optics are excellent, with sharp, round stellar diffraction images across the large field of view, and without the coma visible in fast parabolic Newtonians. Not only does the telescope give incredible views of deep-space objects and star fields, but it is a fine lunar and planetary instrument as well. Jupiter shows numerous cloud belts with a great deal of structure within the belts; Saturn's ring divisions and disk markings are very nicely resolved.

"My latest application of the 8" LXD55 Schmidt-Newtonian is to image deep-space objects with the Fuji FinePix S2Pro digital camera. Although this camera was developed as a consumer product, not as an astro-imaging device, the results I have obtained are most rewarding. I am enclosing a CD-ROM of some of my images [pp. 79, 81]. *All images were obtained simply by attaching the camera body to the telescope, exposing* ***unguided*** *for 2 to 3 minutes, and then compositing several images. In my 20 years as an amateur astronomer I have never obtained such impressive results with so little effort!*

— H. Tokumitsu, Tokyo, Japan.

Automatic GO TO capability to *any* object of known Right Ascension and Declination.

Nine selectable slew and slow-motion speeds: 4.5°, 3°, and 1.5°/sec, 128x, 64x, 16x, 8x, 2x, and 1x sidereal.

Automatic sidereal-rate tracking in RA keeps objects precisely centered in the field.

Control of the telescope through your PC and full upgradability over the Internet, using the RS-232 serial interface. (Requires optional #505 Connector Set.)*

Battery Pack (12v DC): Included with each LXD55-Series telescope, the battery pack rests on the telescope's accessory shelf and plugs into the control panel. The battery pack accepts eight (user-supplied) D-cell batteries, which power the telescope for about 40 hours.

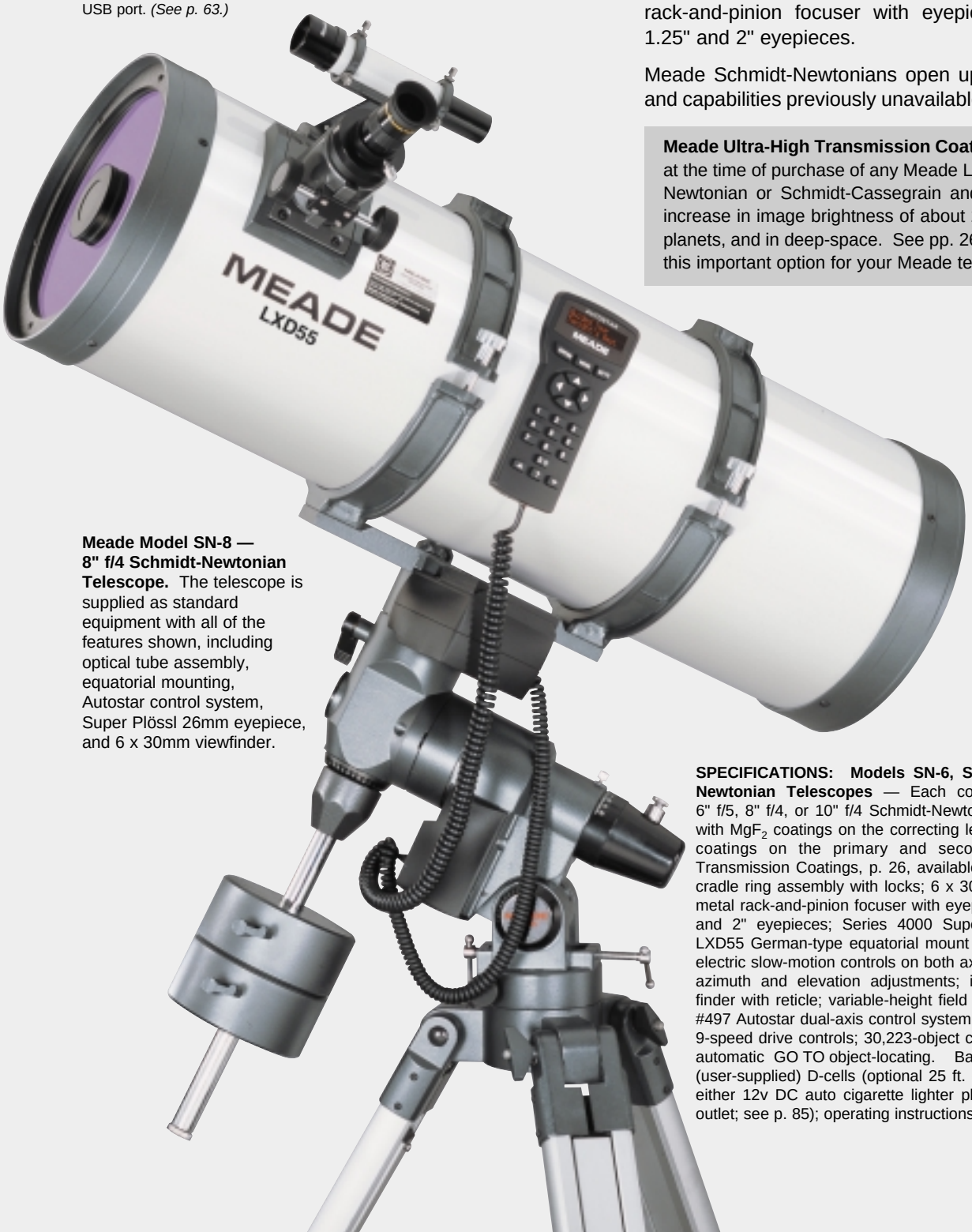
*For PC's with USB ports order the Meade **USB to RS-232 Bridge Cable,** which permits connection between the telescope's RS-232 serial interface and the PC's USB port. *(See p. 63.)*

Meade LXD55-Series Schmidt-Newtonians

Manufactured entirely at the Meade Irvine facility, LXD55-Series diffraction-limited Schmidt-Newtonian optics yield pinpoint stellar images over extremely wide fields, with *one-half* the coma of paraboloids of the same focal ratios. Combined with fast f/4 (8", 10") or f/5 (6") optics, the standard-equipment Super Plössl 26mm eyepiece yields an actual field in excess of 1.3°, for brilliant, rich-field imaging of nebulae, galaxies, and star clusters. High-power lunar and planetary images reveal subtle detail often lost in telescopes of lesser optical resolution. The optics are mounted in machined aluminum cells fitted to white-enameled metal tubes; each tube accepts the giant Meade rack-and-pinion focuser with eyepiece holders for both 1.25" and 2" eyepieces.

Meade Schmidt-Newtonians open up the skies to images and capabilities previously unavailable in telescopes of their

Meade Ultra-High Transmission Coatings may be specified at the time of purchase of any Meade LXD55-Series Schmidt-Newtonian or Schmidt-Cassegrain and result in a dramatic increase in image brightness of about 20% on the Moon and planets, and in deep-space. See pp. 26 - 27 for full details on this important option for your Meade telescope.



Meade Model SN-8 — 8" f/4 Schmidt-Newtonian Telescope. The telescope is supplied as standard equipment with all of the features shown, including optical tube assembly, equatorial mounting, Autostar control system, Super Plössl 26mm eyepiece, and 6 x 30mm viewfinder.

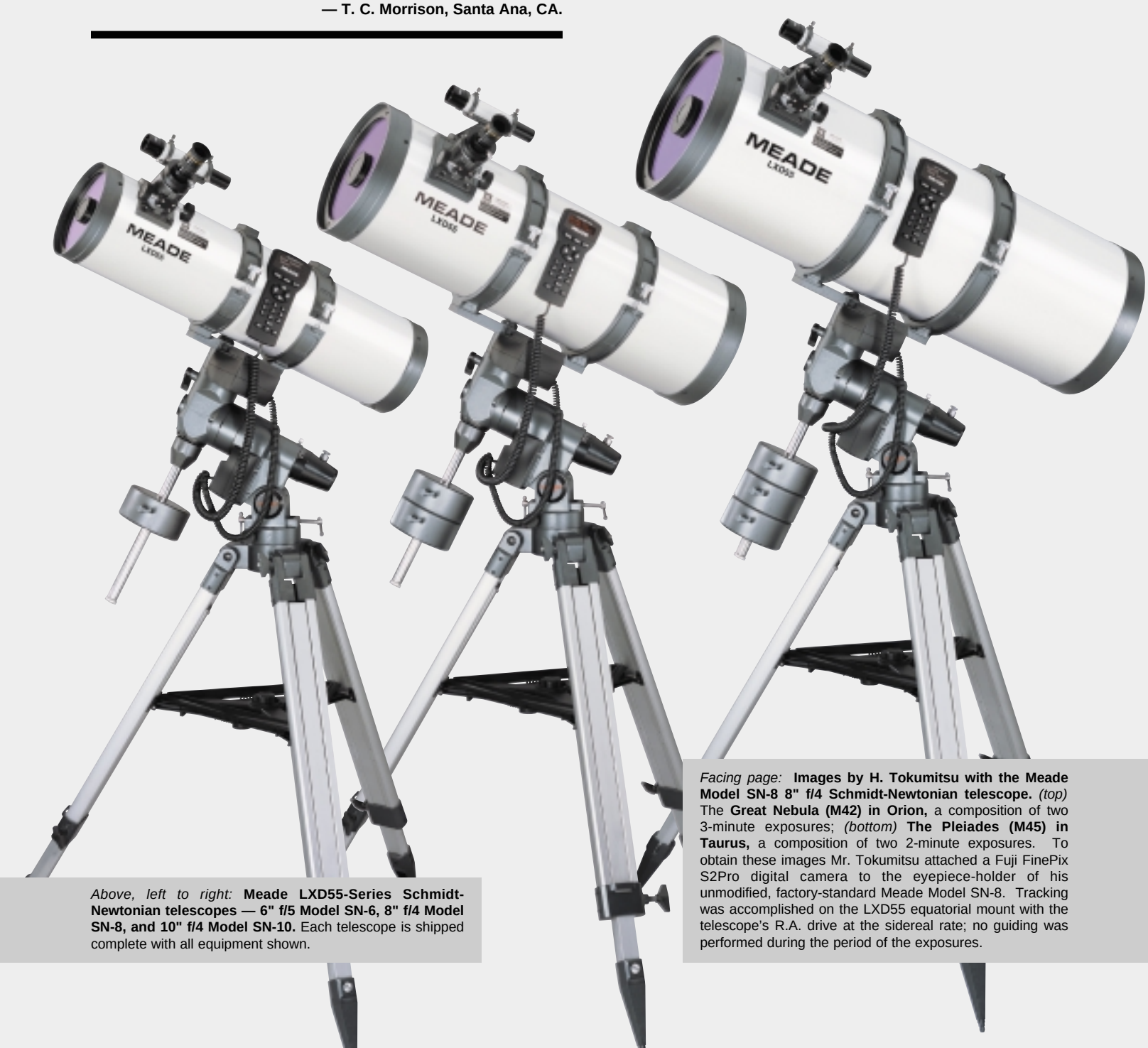
SPECIFICATIONS: Models SN-6, SN-8, and SN-10 Schmidt-Newtonian Telescopes — Each complete telescope includes 6" f/5, 8" f/4, or 10" f/4 Schmidt-Newtonian optical tube assembly with MgF_2 coatings on the correcting lens and standard aluminum coatings on the primary and secondary mirrors (Ultra-High Transmission Coatings, p. 26, available optionally); quick-release cradle ring assembly with locks; 6 x 30mm achromatic viewfinder; metal rack-and-pinion focuser with eyepiece holders for both 1.25" and 2" eyepieces; Series 4000 Super Plössl 26mm eyepiece. LXD55 German-type equatorial mount with worm gear drives and electric slow-motion controls on both axes; micrometric controls for azimuth and elevation adjustments; illuminated polar alignment finder with reticle; variable-height field tripod with accessory shelf. #497 Autostar dual-axis control system with digital readout display; 9-speed drive controls; 30,223-object celestial software library and automatic GO TO object-locating. Battery pack accepting eight (user-supplied) D-cells (optional 25 ft. cords permit powering from either 12v DC auto cigarette lighter plug or from 115v AC home outlet; see p. 85); operating instructions.

"Stunning! That is the only word I can utter that adequately describes my view of the Pleiades (M45) in Taurus. To see the ***entire cluster*** *of hundreds of stars in that huge field of view offered by the 10" LXD55 Schmidt-Newtonian was truly amazing. Faint nebulosity permeated the cluster like no other image I've seen and I was delighted to see razor sharp star images all the way out to the edge of the field. The Autostar flawlessly led me from one beautiful object to the next. Adding a Barlow offered high power views of Saturn and Jupiter that were nothing short of remarkable. The telescope's fast f/4 focal ratio has already enabled me to take some of my first astrophotos of the Orion Nebula (M42) with great results. I was so excited to see the results of my first night's astrophotography with film, I am now looking forward to taking the telescope's wide field of view and fast photographic speed into the realm of CCD imaging…The performance of the telescope surpasses that of instruments I have used costing many hundreds of dollars more."*

— T. C. Morrison, Santa Ana, CA.

apertures and price levels. Consider what a Meade LXD55 telescope can do for your observing and imaging programs:

Model SN-6: 6" f/5 Schmidt-Newtonian — Observe *hundreds* of galaxies, nebulae, and star clusters of all types *your very first night out,* and hundreds more the next night out, simply by pressing the Autostar GO TO pushbutton. Watch as the telescope moves effortlessly and automatically from major planet to asteroid to galaxy to nebula at 4.5°/second, placing every object in the center of the telescopic field. Study fine fault lines on the Moon, structural detail in Jupiter's cloud belts and Red Spot, the Cassini division in Saturn's rings, and much more. While observing large galactic or nebular objects such as the Andromeda Galaxy (M31), note the tightly-focused stellar images



Above, left to right: **Meade LXD55-Series Schmidt-Newtonian telescopes — 6" f/5 Model SN-6, 8" f/4 Model SN-8, and 10" f/4 Model SN-10.** Each telescope is shipped complete with all equipment shown.

Facing page: **Images by H. Tokumitsu with the Meade Model SN-8 8" f/4 Schmidt-Newtonian telescope.** *(top)* The **Great Nebula (M42) in Orion,** a composition of two 3-minute exposures; *(bottom)* **The Pleiades (M45) in Taurus,** a composition of two 2-minute exposures. To obtain these images Mr. Tokumitsu attached a Fuji FinePix S2Pro digital camera to the eyepiece-holder of his unmodified, factory-standard Meade Model SN-8. Tracking was accomplished on the LXD55 equatorial mount with the telescope's R.A. drive at the sidereal rate; no guiding was performed during the period of the exposures.

across the entire field of view, absent much of the *coma* normally seen with fast paraboloidal mirrors. The Meade 6" Schmidt-Newtonian is fully capable of capturing an amazing array of deep-space images in the eyepiece.

Model SN-8: 8" f/4 Schmidt-Newtonian — With 78% more light-gathering power than the SN-6, the 8" Model SN-8 roughly triples the number of observable objects in deep-space and resolves extremely fine planetary detail as well: Jupiter's cloud belts are seen as a web of intricate discontinuities; transits and shadow transits of Jupiter's main satellites are observable; six of Saturn's satellites may be seen in revolution about the planet. Deep-space phenomena may be observed in dramatically-heightened detail with the larger 8" aperture, as Autostar moves the telescope automatically from one spectacular object to the next. Observe all 110 objects in the Messier Catalog, 109 objects in the Caldwell Catalog, as well as thousands of objects in the New General Catalog (NGC) and Index Catalog (IC), locating galaxies, nebulae, and star clusters to magnitude-14. CCD and photographic images at the telescope's prime f/4 focus show a new level of resolution and detail after only a few minutes' exposure.

The LXD55 Control Panel is conveniently located below the upper bearing of the polar axis and includes four connectors and the ON-OFF switch.

Model SN-10: 10" f/4 Schmidt-Newtonian — A quantum leap in image brightness and resolution, the 10" Model SN-10 provides for a lifetime of serious study in deep-space or within the Solar System. Use Autostar to take an automatic tour, of, say, the 200 brightest diffuse nebulae, spiral galaxies, and globular star clusters. Or, with Autostar's pushbutton electronic slow-motion controls, scan

Specifications and Features: Meade LXD55-Series Telescopes

TELESCOPE MODEL:	SN-6	SN-8	SN-10	AR-5	AR-6
Optical Design	Schmidt-Newtonian	Schmidt-Newtonian	Schmidt-Newtonian	Achromatic Refractor	Achromatic Refractor
Clear Aperture	152mm (6")	203mm (8")	254mm (10")	127mm (5")	152mm (6")
Focal Length; Focal Ratio	762mm; f/5	812mm; f/4	1016mm; f/4	1143mm; f/9	1219mm; f/8
Resolving Power (arc secs.)	0.74	0.56	0.45	0.90	0.74
Optical Coatings	MgF_2; standard aluminum	MgF_2; standard aluminum	MgF_2; standard aluminum	multi-coated	multi-coated
Ultra-High Transmission Coatings *(p. 26)*	available optionally	available optionally	available optionally	—	—
Limiting Visual Magnitude *(approx.)*	13.5	14.0	14.5	12.8	13.5
Limiting Photographic Magnitude *(approx.)*	16.0	16.5	17.0	15.3	16.0
Image Scale (degs./inch)	1.89°/inch	1.78°/inch	1.42°/inch	1.26°/inch	1.18°/inch
Maximum Practical Visual Power	400x	500x	600x	350x	400x
35mm Angular Film Coverage	1.78° x 2.53°	1.66° x 2.37°	1.34° x 1.91°	1.19° x 1.70°	1.11° x 1.58°
Optical Tube Dimensions (dia. x length)	7.1" x 27"	10" x 29.5"	11.9" x 36.1"	6.3" x 41"	8" x 42"
Secondary Mirror Obstruction (dia.; %)	2.14"; 12.7%	3.10"; 15.0%	3.19"; 10.2%	—	—
Counterweights	1 x 10 lbs.	2 x 10 lbs.	3 x 10 lbs.	1 x 10 lbs.	2 x 10 lbs.
ALL MODELS:					
Telescope Mounting	LXD55, German-type				
Setting Circle Diameters, RA and Dec.	2.25"				
Polar Illuminated Viewfinder	included				
RA Control System	9-speed, microprocessor-controlled, 12v DC, 72mm (2.83") worm gear				
Declination Control System	9-speed, microprocessor-controlled, 12v DC, 72mm (2.83") worm gear				
Hemispheres of Operation	North and South				
GO TO Pointing Precision *(approx.)*	15 arc mins.				
Slow-Motion Controls	electric, both axes				
Bearings	journal bearings: RA: 1 x 55mm, 1 x 35mm; Dec: 1 x 62mm, 1 x 33mm				
Autostar Hand Controller	PIC 16C57 microcontroller; 2 line x 16 alphanumeric character display; 20-button keypad, red LED backlit				
Main Telescope Controller	Motorola 68HC11 microprocessor; 1-Megabyte flash memory (field reprogrammable); 32K RAM				
Batteries *(user-supplied)* [Note 1]	8 x D-cells				
Battery Life *(approx.)*	40 hours				
Onboard Celestial Object Database	30,223 objects				
Slew Speeds	*both axes:* 1x, 2x, 8x, 16x, 64x, 128x sidereal; 1.5°/sec., 3°/sec., 4.5°/sec.				
Tracking Rates	sidereal, lunar, or custom-selected from 2000 incremental rates				
Materials: Tube Body	enameled steel	enameled steel	enameled steel	aluminum	aluminum
Mount Castings	aluminum	aluminum	aluminum	aluminum	aluminum
Primary, Secondary Mirrors [Note 2]	Pyrex® glass	Pyrex® glass	Pyrex® glass	—	—
Correcting Plate/Lens	clear float glass	clear float glass	clear float glass	—	—
Objective Lens	—	—	—	BK7; F2	BK7; F2
Total Net Telescope Weight	48 lbs.	69 lbs.	85 lbs.	49 lbs.	72 lbs.
Total Shipping Weight *(approx.)*	66 lbs.	91 lbs.	117 lbs.	73 lbs.	99 lbs.
Field Tripod Height	all models: 27" - 43", variable				

[1] LXD55-Series models may alternatively be powered from an automobile cigarette lighter plug, using the #607 Power Cord, or from a 115v AC home outlet, using the #547 AC Adapter; both the #607 and the #547 include 25 ft. cords. [2] All Pyrex glass used in Meade Schmidt-Newtonian telescopes is of Grade-A quality, fine-annealed.

All LXD55-Series telescopes include an illuminated polar alignment finder as standard equipment.

the surface of the Moon at high magnification. Let Autostar locate and center in the field the outer planets Uranus and Neptune, now visible as finite-sized orbs, or Pluto, at the telescope's very limit of observability. Use the Meade #140 2x Barlow Lens *(p. 85)* to double the telescope's effective focal length with no diminution whatever in resolution, and study surface detail on Mars, Jupiter, and Saturn at high magnifications. The SN-10 presents wide, extremely bright star fields at lower powers, while resolving, under favorable seeing conditions, remarkable lunar and planetary detail at higher powers. It is an uncommon observer who might outgrow the capabilities of the Meade 10" LXD55.

Astrophotography and CCD imaging: Armed with their fast photographic speeds, Meade LXD55-Series Schmidt-Newtonians are ideally suited for deep-space astrophotography and CCD imaging at the telescope's prime focus. Spectacular, wide-field images of extended nebulae (*e.g.,* the Lagoon Nebula, M8; the Orion Nebula, M42; or the Trifid Nebula, M20) may be obtained in minimal exposure times.

"…the [Meade] LXD55 Schmidt-Newtonians are a fantastic dollar value and one that is unequaled in today's market...we liked [the] quality metal construction with excellent fit and finish, [the] multipurpose optical system with focuser and accessories for visual and photographic work, [and the] Autostar computerized pointing...The fit and finish of the mount and telescope are first-class...most of the metal components are quality die castings...Another noteworthy feature is the rack-and-pinion focuser, which has helical-cut gears, a friction lock, and all-metal construction...it comes standard with 1.25" and 2" eyepiece holders...The focuser's silky smooth 3-inch travel is supplemented with a 1.5-inch-long extension tube.

...Meade's new scopes are fast (short-focal-ratio) Newtonians with spherical (rather than paraboloidal) primary mirrors and a Schmidt [correcting] plate at the front of the tube to correct the primary's inherent spherical aberration. With the corrector positioned near the primary's focal point, as it is in these telescopes, there is less coma than in a conventional Newtonian reflector of the same f/ratio.

...Ronchi tests showed the optics of both the 8- and 10-inch scopes to be smooth and free of obvious zones...these Schmidt-Newtonians...produced very satisfying views of Venus, Saturn, and especially of the Moon...These scopes really excel at low- and medium-power deep-sky observing. In the early-morning sky last September [2002], the 10-inch offered one of the finest views of the Pleiades I can recall. And sweeping the Milky Way with a 114x wide-field eyepiece was breathtaking.

...the mount is attractive and robust, easily executing maximum-speed slews when carrying the 60-pound load of the 10-inch telescope and its counterweights...Perhaps the most exciting feature of these new scopes is Go To pointing. Press a few buttons on Autostar's keypad and the telescope will automatically point to the Moon, planets, and thousands of stars and deep-sky objects stored in an internal database. In past Test Reports we've given Autostar very high marks, and there's nothing here that changes our opinion...Although we found that the Go To functions worked well when the mount was only roughly aligned, the best telescope performance comes with more accurate alignment. [The standard-equipment] polar-axis "finder" with an illuminated reticle...speeds the process of getting the mount aimed at the celestial pole. There are fine adjustments in azimuth and elevation, which make it easy to refine the polar alignment.

...Judging from our e-mail, these Schmidt-Newtonians have certainly sparked an interest among astrophotographers...For "snapshot" imaging of the Moon and planets, especially with today's digital cameras, they are very solid performers...When it comes to long-exposure deep-sky photography...though the LXD55's drive has greater periodic error, its smoothness and manual guiding capabilities are similar to my Vixen GP-DX mount, which has a fine reputation among astrophotographers. And keep in mind that the Vixen mount alone costs half again as much as the whole 10-inch LXD55 telescope!

...Conventional wisdom has long held that 6-inch and larger reflectors are telescopes for "serious" observers. And while these new LXD55 Schmidt-Newtonians from Meade represent the company's entry-level instruments in this aperture class, they are packed with features found on far more expensive telescopes. They are indeed an extraordinary value in today's market, as well as being all-around fine telescopes." **— from the review in *Sky & Telescope,* December, 2002.**

The Andromeda Galaxy (M31), as imaged by H. Tokumitsu with the Meade Model SN-8 8" Schmidt-Newtonian telescope. The final image is a composition of four unguided 3-minute images, using the Fuji FinePix S2Pro digital camera.

Meade 8" Model SC-8 Schmidt-Cassegrain

Combining the diffraction-limited optical system of the Meade 8" LX200GPS Schmidt-Cassegrain *(p. 37)* with the LXD55 equatorial mounting *(p. 76),* the 8" Model SC-8 is an excellent, less-expensive alternative to other Meade Schmidt-Cassegrain models. Included as standard equipment are all of the following features:

LXD55 Equatorial Mounting: The rigid, stable LXD55 mounting provides an excellent platform for the 8" optical tube assembly, complementing the Autostar controller in both visual observing and astro imaging applications

Autostar Dual-Axis Control System: Slew the telescope automatically at 4.5°/sec. to any of 30,000 database objects – including over 13,000 deep-sky objects; all of the major planets; double and variable stars; and more. Or locate any object in the sky simply by inputting its Right Ascension and Declination and pressing GO TO. The #497 Autostar permits any of nine selectable slew speeds on both telescope axes, from 1x sidereal for photo-guiding to 4.5°/sec.

Full Accessorization*:* The Model SC-8 is supplied complete with Super Plössl 26mm eyepiece, diagonal prism, and a wide-field 8 x 50mm viewfinder. Optional eyepieces *(see p. 94)* are available for magnifications to 600X.

For optical specifications on the Model SC-8, refer to p. 25; for LXD55 equatorial mount specifications, refer to p. 80.

SPECIFICATIONS: 8" Model SC-8 Schmidt-Cassegrain — Includes 8" Schmidt-Cassegrain optical tube assembly (D = 203mm, F = 2000mm f/10) with MgF_2 coatings on the correcting plate and standard aluminum coatings on the primary and secondary mirrors (Ultra-High Transmission Coatings, p. 26, available optionally); LXD55 German-type equatorial mount with worm gear drives and electric slow-motion controls on both axes; micrometric controls for azimuth and elevation adjustments; illuminated polar alignment finder with reticle; variable-height field tripod with accessory shelf. Quick-attach cradle ring assembly with locks; 8 x 50mm viewfinder; Series 4000 Super Plössl 26mm eyepiece; diagonal prism. #497 Autostar dual-axis control system with digital readout display; 9-speed drive controls; 30,223-object celestial software library and automatic GO TO object-locating. Battery pack accepting eight (user-supplied) D-cells (optional 25 ft. cords permit powering from either 12vDC auto cigarette lighter plug or from 115vAC home outlet); operating instructions.

A wide range of visual and imaging accessories is available for the 8" Model SC-8. *(clockwise from upper left):* f/6.3 Focal Reducer (1) and Illuminated Reticle Eyepiece (2); f/3.3 CCD Focal Reducer; T-Adapter; Variable Tele-Extender; Zero Image-Shift Micro-focuser; Off-Axis Guider. *(See p. 63 for further details.)*

Meade Model SC-8 8" f/10 Schmidt-Cassegrain Telescope. Supplied complete with standard equipment as shown.

Meade LXD55-Series Achromatic Refractors

With objective lenses that resolve to the theoretical limits for their apertures, Meade 5" and 6" LXD55 refractors present all of the diffraction-limited optical performance obtainable from the classical 2-element achromat design. Deep-space images, in particular, are rich in resolution and contrast, with a minimum of chromatic aberration.

LXD55 Equatorial Mount: Both refractors incorporate the Meade LXD55 equatorial mounting for smooth, effortless sidereal-rate tracking in RA or for automatic dual-axis GO TO operation at 4.5°/second with the standard-equipment Autostar hand controller. Precision worm gears on both axes assure low-backlash operation at all nine Autostar speeds. Fine-adjust elevation (latitude) and azimuth controls, used in conjunction with the mounting's integrated polar alignment viewfinder, permit precise polar alignment. This precision alignment is immediately appreciated during astrophotography or CCD imaging, where only minor corrections are required to the telescope's pointing position during the exposure. A 12v DC battery pack rests on the telescope's accessory shelf and operates either instrument for about 40 hours from eight (user-supplied) D-cell batteries.

Autostar Dual-Axis Electronic Control System: Locate any of 30,223 celestial objects in the Autostar database – automatically – at a push of the GO TO button. See p. 76 for a detailed listing of Autostar capabilities.

SPECIFICATIONS: 5" Model AR-5 and 6" Model AR-6 Achromatic Refracting Telescopes — Each complete telescope includes 5" f/9 or 6" f/8 achromatic refractor optical tube assembly with EMC super multi-coatings. LXD55 German-type equatorial mount with worm gear drives and electric slow-motion controls on both axes; micrometric controls for azimuth and elevation adjustments; illuminated polar alignment finder with reticle; variable-height field tripod with accessory shelf. Quick-release cradle ring assembly with locks; 8 x 50mm achromatic viewfinder; metal rack-and-pinion focuser with eyepiece holders for both 1.25" and 2" eyepieces; Series 4000 Super Plössl 26mm eyepiece; diagonal prism. #497 Autostar dual-axis control system with digital readout display; 9-speed drive controls; 30,223-object celestial software library and automatic GO TO object-locating. Battery pack accepting eight (user-supplied) D-cells (optional 25 ft. cords permit powering from either 12v DC auto cigarette lighter plug or from 115v AC home outlet; see p. 85); operating instructions.

(below) **Meade 5" Model AR-5 and 6" Model AR-6 Achromatic Refractors** are shipped complete with the LXD55 equatorial mount, Autostar control system, and accessories.

Meade Model AR-6 — 6" f/8 Achromatic Refracting Telescope. The telescope is supplied as standard equipment with all of the features shown, including optical tube assembly, equatorial mounting, Autostar control system, Super Plössl 26mm eyepiece, and 8 x 50mm viewfinder.

Observing with a Meade 5" or 6" refractor is an experience unlike that with other telescopes, as the refractors' large unobstructed clear apertures enable a level of resolution and high contrast normally reserved for larger instruments of other types.

Model AR-5: 5" f/9 Achromatic Refractor — Explore over 30,000 of Autostar's database objects — galaxies, nebulae, and star clusters — or any object of known RA and Dec., as the telescope moves automatically at 4.5°/sec. to locate and center each object. The AR-5 yields satisfying images of the Moon and planets: use the Autostar slow-motion pushbuttons to rove over the surface of the Moon at high power or to resolve surface detail on Jupiter and Saturn.

Model AR-6: 6" f/8 Achromatic Refractor — The Meade 6" LXD55 refractor, with 44% more light-collecting power than the 5" model, permits a much wider imaging capability. Deep-space objects, from bright galaxies like Andromeda (M31) to faint nebulae like NGC 6559 in Sagittarius and thousands of other galaxies, nebulae, and star clusters in between, take on added brightness and resolution of form and structure. Globular star clusters, such as M13 in Hercules, are better resolved, often to the core of the cluster. Significantly increased detail is visible on the Moon and planets; double stars may be split to the telescope's 0.74-arc sec. limit.

Helical-cut rack-and-pinion focusers on Meade Models AR-5 and AR-6 permit smooth, precise focusing of the image. Eyepiece holders are provided for both 1.25"- and 2"-barrel eyepieces.

LXD55-Series Schmidt-Newtonians and Achromatic Refractor with Electronic Controller

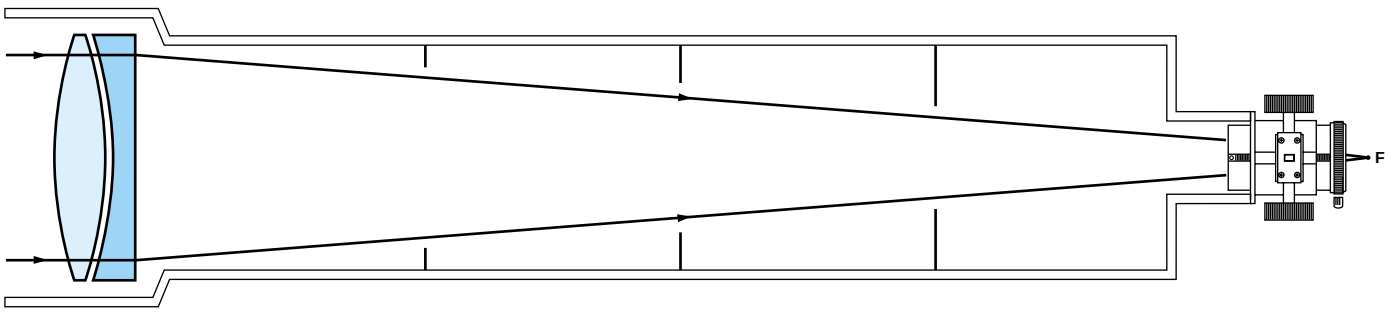
Meade EC-model LXD55 telescopes include all the optical performance and mechanical features of the Autostar models, above, but with the dual-axis Electronic Controller (EC) substituted for the Autostar Controller. Optical assemblies, equatorial mounting, tripod, and accessories are identical to the respective Autostar models.

The Electronic Controller permits a choice of four dual-axis slewing speeds, including 2x, 8x, and 32x sidereal and 4.5°/sec., plus automatic sidereal-rate tracking in R.A. Importantly, the EC-models may be upgraded to full Autostar status simply by purchasing the #497 Autostar handbox separately at any time in the future.

Standard equipment on EC-models includes an illuminated polar alignment finder *(left)* and the Electronic Controller (EC).

SPECIFICATIONS: Models SN-6EC, SN-8EC, and AR-5EC — Identical in every detail to the respective Models SN-6 and SN-8 *(p. 77)* and to Model AR-5 *(p. 83),* but with Electronic Controller (EC) in place of #497 Autostar Controller. Electronic Controller includes four dual-axis slewing speeds: 2x for photoguiding; 8x for image centering in the main telescope; 32x for image centering in the viewfinder; 4.5°/second for rapid-slew of the telescope across the sky; plus automatic sidereal-rate RA tracking. *#497 Autostar Controller may be added at any time in the future and permits the full range of Autostar functions, including automatic GO TO, as described for Autostar-equipped telescopes, above.*

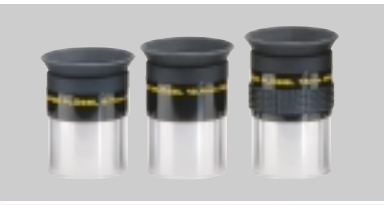
Optical Design of Meade Achromatic Refractors. Light travels through the front lens element of optical crown glass, then through the rear flint-glass element and is brought to a focus at F. The crown and flint glass elements have different indexes of refraction, permitting the design to be *achromatic,* or color-corrected.

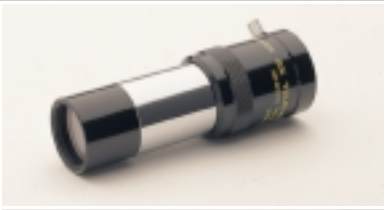


Meade EC-Model LXD55 Telescopes. *(left to right)* Models SN-6EC 6" Schmidt-Newtonian, SN-8EC 8" Schmidt-Newtonian, and AR-5EC 5" Achromatic Refractor.

Accessories for Meade® LXD55-Series Telescopes

See also pp. 94 - 107.





Series 4000 Eyepieces: Meade professional-level Series 4000 eyepieces enable any LXD55-Series telescope to reach its maximum capability. See pp. 94 - 95 for further details. *Note:* Because of pupillary diameter restrictions of the human eye, no eyepiece of longer focal length than 32mm can effectively be used with the short focal ratio of the Model SN-6, or longer than 26mm with Models SN-8 or SN-10.

#140 Series 4000 2x Apochromatic Barlow Lens: Designed to complement premium-grade eyepieces, such as the Meade Series 4000 oculars, the #140 doubles any eyepiece magnification without in any way reducing the level of image resolution or color correction. The Meade **#126 2x Telenegative Barlow** and **#127 2x-3x Variable Barlow** *(p. 102)* are fine lower-cost alternatives to the #140, and yield excellent performance on LXD55-Series telescopes.

Series 4000 8mm - 24mm Zoom Eyepiece: High-resolution, 7-element multi-coated optics with 55° field at 8mm. Graduated scale in 1mm units indicates exact focal length in use. An excellent complement to all Meade telescope models. *(See also p. 96.)*

Series 4000 Photo-Visual Color Filters: A significant aid in enhancing image contrast on the Moon and planets, Meade Series 4000 color filters thread into the barrels of all Meade 1.25" eyepieces, and into the barrels of virtually all other 1.25" eyepiece brands as well. *(See pp. 98 - 99.)*

Series 4000 Nebular Filters: Meade #908B, #908N, and #908X filters effectively block the most common forms of light pollution, while allowing nebular light to pass through essentially unattenuated. *(See also pp. 100 - 101.)*

Camera Adapters: For photography through an LXD55-Series telescope, the Meade **Basic Camera Adapter** *(p. 103)* is required. Alternately, the **Variable-Projection Camera Adapter** *(p. 103)* permits a continuous range of projection magnifications. Each camera adapter requires a T-Mount for the specific brand of 35mm camera employed.

Power Adapters and Cords: In addition to their standard-equipment battery packs LXD55-Series telescopes may also be powered from standard 115v AC home outlets with the **#547 AC Adapter.** Alternately, any model may be powered in the field from an automobile cigarette lighter plug by using the **#607 Power Cord** *(shown)***.** The #547 and #607 include 25 ft. cords.